International Image Interoperability Framework (IIIF)
Sharing high resolution images across institutional boundaries

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Digital systems and services for GLAM and digitally supported research

Part of the University Library of KU Leuven

Division of Leuven Research & Development (LRD)

Internal and external partnerships

Top: 1st DOBIS/LIBIS user group meeting
Bottom: Campus library Arenberg / KU Leuven (instagram.com/kuleuven)
Digital research and the need for high quality access to digital resources
Lot's of data is unique and can only be captured once
Integrated Database for Early Music

Alamire Foundation
- International Centre for the Study of Music in the Low Countries
- Research on medieval music manuscripts

Hercules call 2013
- Flemish investment fund for research infrastructures
- Proposal accepted, budget heavily reduced
- Project kick-off May 2014

Manuscript illumination.
Probably created by the workshop of Petrus Alamire for the Illustrious Brotherhood of Our Lady in 's-Hertogenbosch (around 1530's).
Source: idemdatabase.org
IDEM research infrastructure
In search of a new data visualisation solution
International Image Interoperability Framework™

Enabling Richer Access to the World's Images

Learn how to get started

IIIF Community Newsletter, Volume 1 Issue 3, Now Online

Community Focused
The IIIF is driven by a community of research, national and state libraries, museums, companies and image repositories committed to providing access to high quality image resources.

Defined APIs
The IIIF is anchored by well defined Application Programming Interfaces developed and vetted by an open and rigorous community process.

Plug 'n' Play Software
The IIIF community encourages and supports the development of compatible image serving and viewing software that is easy to install and provides a dazzling user experience.
Mirador viewer
projectmirador.org

Open-source, web-based, multi-window image viewing platform with the ability to zoom, display, compare and annotate images from around the world.
IDEM research infrastructure
Integration of IIIF and Mirador in Rosetta

LIBIS services and tools
IDEM – Live in August 2015

Public access to metadata and direct link to images in Mirador via Omeka

**Integrated Database for Early Music:** [http://www.idemdatabase.org/](http://www.idemdatabase.org/)

Resolvable ULRs refer to image representations (JPEG2000) in Mirador viewer

<table>
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<th>B-Br-ms-9126</th>
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<tr>
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<td>Brussels - Koninklijke Bibliotheek van België / Bibliothèque royale de Belgique [B-Br]</td>
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<td>codex</td>
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<td>Format (specific)</td>
<td>choirbook</td>
</tr>
<tr>
<td>Category</td>
<td>polyphony</td>
</tr>
<tr>
<td>Content</td>
<td>Choirbook containing masses, motets and magnificats</td>
</tr>
<tr>
<td>Authors / composers</td>
<td>Josquin des Prez, La Rue, Pierre de Agricola, Alexander Orto, Marbrianus de Barbireau, Jacobus</td>
</tr>
<tr>
<td>Language</td>
<td>Latin; French (notes / titles); Dutch (notes / titles)</td>
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<td>Origin (country / region)</td>
<td>Southern Low Countries; Habsburg-Burgundian Netherlands</td>
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<td>Origin (city / location)</td>
<td>workshop of Petrus Alamire [documented 1496-1534]</td>
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<tr>
<td>Date range</td>
<td>between 1504 and 1506</td>
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IDEM – Anno 2017

35 polyphonic music manuscripts online

Access to all publicly available manuscripts via IDEM: http://www.idemdatabase.org/
IIIF and Mirador in the picture
Growing interest from research groups and heritage professionals

Source: http://lectio.ghum.kuleuven.be/
Magister Dixit project
Lectio research group, KU Leuven University Libraries, UCL, KBR, LIBIS

Digitization & virtual reconstruction of Lecture notes (1425-1797)

Phase I (live March 2016)
• KU Leuven & UCL collections
• 331 complex objects
• > 110,000 images, 4 TB

Phase II (2017)
• + 4 TB
• + Royal Library of Belgium
### LOGICA

**Collection, Magister Dixit Project**

<table>
<thead>
<tr>
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<th>Logica.</th>
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<td>Date</td>
<td>1636</td>
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<tr>
<td>Student</td>
<td>de Laudnoys, Nicolaus</td>
</tr>
<tr>
<td>Provenance</td>
<td>Leuven (Louvain); Faculty of Arts, Paedagogium Lillii</td>
</tr>
</tbody>
</table>
| Content | Topica  
Sophistici elenchi  
Praedicamenta  
Analytica posteriora |

Website: [http://lectio.ghum.kuleuven.be/](http://lectio.ghum.kuleuven.be/)
Magister Dixit
540 lecture notes in Mirador

Website: http://lectio.ghum.kuleuven.be/
Resolver URL: http://resolver.libis.be/IE5126528/representation
Magister Dixit project
Small changes to Mirador implementation

- Slow loading of library overview
- Difficult to find manuscripts in large collection
Magister Dixit project
Changes to Mirador implementation

Changes to Mirador implementation

INSIGHT launch event
Codex Eyckenis
Eighth-century Gospel Book from the treasury of Saint Catherine’s church in Maaseik

Website: http://www.codexeyckensis.be/
Codex Eyckensis
Extensive metadata, including manifest URL

Website: http://www.codexeyckensis.be/

"Book of Lindisfarne" and the insular pointed minuscule used in non-scriptural texts. Major sections of the text (though not the capitula) are completed with horizontal lines preceded by (and in some cases also followed by) red dots. In addition every sentence was accentuated with a graceful black initial letter. On some of the folios yellow or red dots were placed around these letters as a finishing touch and to enhance readability. Lastly, the initial letter of each paragraph is also outlined by applying yellow or red dots. The Gospel text is a version of the Vulgate, the Latin translation of the Bible by Saint Jerome (Hieronymus of Stridon, 347-420 CE). However, the text of the Codex Eyckensis deviates from the 4th century Vulgate: the scribe has introduced a number of additions and transpositions. Comparable versions of the Gospel texts can be found in the "Book of Kells", the "Book of Armagh" and the "Echternach Gospels".

manifest URL:
http://services.libis.be/m2/manifext/IE5258806/manifest.json

creator:
According to the legend, as reported in the "Vita Harlindis et Reinulae" which was written down between 860 and 880 CE, the "Codex Eyckensis" was written and illuminated by Saints Harlindis and Reinindis—sisters and abbesses of the Frankish Benedictine Abbey of Aldenahr. Research has shown, however, that the Codex Eyckensis was written by a single scribe working in a scriptorium on the continent, presumably in the first Anglo-Saxon abbey on the continent: the Abbey of Echternach which was founded by Saint Willibrord in 698 CE. The scribe concludes the text of the manuscript with the sentence "Tinto volumine deposuo ut quicumque ista legiunt pro laboratore huius opusis deprehensur". This means "Having concluded this book, I now beg all who read this to pray for the worker ("laborator") who produced this manuscript. The fact that he uses the masculine term "laborator" confirms the fact that the scribe was a man.

type:
Museu Maaseik

8th century
According to the legend, as reported in the "Vita Harlindis et Meimulae" which was written down between 860 and 880 CE), the "Codex Eyckensis" was written and illuminated by Saints Harlindis and Helindis-sisters, founders and abbesses of the Frankish Benedictine Abbey of Aldeneik. Research has shown, however, that the Codex Eyckensis was written by a single scribe working in a scriptorium on the continent, presumably in the first Anglo-Saxon abbey on the continent: the Abbey of Echternach which was founded by Saint Willibrord in 698 CE. The scribe concludes the text of the manuscript with the sentence "Finito volumine deosco ut quicumque ista legerint pro laboratore huius operis depraeacentur", which means "Having concluded this book, I now beg all who read this to pray for the worker ("laborator") who produced this manuscript". The fact that he uses the masculine term "laborator" confirms the fact that the scribe was a man."
Codex Eyckenis manifest file

```json
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    },
    {
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    {
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    }
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        "http://services.libis.be/m2/canvas/canvas-2.json",
        "http://services.libis.be/m2/canvas/canvas-3.json",
        "http://services.libis.be/m2/canvas/canvas-4.json",
        "http://services.libis.be/m2/canvas/canvas-5.json"
      ]
    }
  ]
}
```
Loading manifests from different repositories in a single viewer
Interoperability of digital repositories

Local Mirador instance
Interoperability of digital repositories
Demo version of the Mirador viewer, Biblissima project

Biblissima

Codex Eyckensis

SOLEMES, Bibliothèque de l'abbaye Saint-Pi...

biblissima.fr
demos.biblissima-condorcet.fr
Reuse of digital resources
Codex Eyckensis manuscript puzzle

Source: Ben Albritton, Stanford University
IIIF and Mirador in action

Demo film; Local version

Source: idemdatabase.org
Exploring the IIIF universe

Source: http://lectio.ghum.kuleuven.be/
Community Focused

The IIIF is driven by a community of research, national and state libraries, museums, companies and image repositories committed to providing access to high quality image resources.
Participation

Community groups

There are a number of community and technical groups, open to participation from all interested parties, that focus on different areas of interest related to IIIF.

• A/V Technical Specification Group
• Discovery Technical Specification Group
• Manuscripts Community Group
• Museums Community Group
• Newspapers Community Group
• Software Developers Community Group
• Text Granularity Technical Specification Group
Participation

How to get involved

Join our discussion:

https://gitter.im/IIIF

Sign up to receive a newsletter:

https://gitter.im/IIIF

Explore the IIIF community:

http://iiif.io

Share ideas in the IIIF News forum:

http://iiif.io

Attend an IIIF event:

http://iiif.io

Submit a news item:

http://iiif.io

Participate in IIIF projects:

http://iiif.io

The schedule for the event can be accessed here:

http://iiif.io

Eventen worden weergegeven in tijdzone:

http://iiif.io

Google Drive

IIIF

Mappen

IIIF CoCo

IIIF Community

IIIF Community

IIIF Working Document

Bestanden

Call for Comments

README
Further implementation of IIIF

New projects, features and collections @ KU Leuven - LIBIS
New collections and functions

New budget for further implementation of IIIF and Mirador functionalities

- Proper IIIF manifest URI & collection URIs
- Persistent bookmarking
- Visualization of object metadata
- Table of contents
- New Collections
- Annotation function & search API
  - Drag and drop
  - Other sources, viewers, media
  - Performance & IM
  - Authentication API
  - Multispectral images
  - ...
Opportunities & Challenges
IIIF and Mirador helps us to promote the preservation of research resources in the Arts & Humanities
Mirador as a research or a showcase tool?
Open sharing of resources requires a new mindset
Thank you! Questions?

Source: [http://lectio.ghum.kuleuven.be/](http://lectio.ghum.kuleuven.be/)

Roxanne Wyns - [Roxanne.Wyns@kuleuven.be](mailto:Roxanne.Wyns@kuleuven.be)